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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 33849-8									
<div>I hereby certify that this correspondence is being filed with the United States Patent and Trademark Office through the EFS-Web Electronic Filing System on the date below: on <u>April 9, 2008</u> Signature <u>/Jeannie Harris/</u> Typed or printed name <u>Jeannie Harris</u></div>		Application Number <u>10/806,980</u>	Filed <u>2/23/2004</u>								
		First Named Inventor <u>Yin L. Cheung</u>									
		Art Unit <u>2628</u>	Examiner <u>Phu K. Nguyen</u>								
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <table><tr><td><input type="checkbox"/> applicant/inventor.</td><td><u>/William P. Jensen/</u> Signature</td></tr><tr><td><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</td><td><u>William P. Jensen</u> Typed or printed name</td></tr><tr><td><input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>36,833</u></td><td><u>713-658-2323</u> Telephone number</td></tr><tr><td><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</td><td><u>April 9, 2008</u> Date</td></tr></table> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> <div><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</div>				<input type="checkbox"/> applicant/inventor.	<u>/William P. Jensen/</u> Signature	<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)	<u>William P. Jensen</u> Typed or printed name	<input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>36,833</u>	<u>713-658-2323</u> Telephone number	<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____	<u>April 9, 2008</u> Date
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This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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REMARKS

On January 5, 2007, the Examiner issued an Office Action rejecting claims 1-52 for various reasons. As part of his rejection, the Examiner relied on various pages of a VoxelGeo 1.1 Manual, hereinafter referred to as *Holden*, that was filed with Applicant's Fifth Information Disclosure Statement on September 5, 2006. The Examiner relied on *Holden* (pp. 9-19 through 9-22) and, for certain claims, "official notice" to support a Section 103(a) rejection. Office Action, pp. 5-11. Furthermore, the Examiner requested the complete *Holden* manual. Office Action, p. 11. On April 11, 2007, the entire *Holden* manual was filed as part of Applicant's Sixth Supplemental Information Disclosure Statement as requested by the Examiner.

On May 25, 2007, Applicant's representatives (William Jensen (Houston, Texas) and Chris McDonanld (Washington, D.C.)) conducted an in-person interview with the Examiner concerning the differences between *Holden* and claims 1-52. Notably, the Examiner never suggested that he needed to postpone the interview or had not reviewed the complete *Holden* reference. During the interview, an agreement was reached that the "103(a) rejections will be withdrawn if the claims are amended to show meaning of the claimed 'real-time,' *e.g.*, 'sufficiently fast to be perceived in real-time as a 3D probe is moved,' or 'substantially at the same time as the 3D sampling probe is moved.'" Interview Summary, p. 2. The Examiner further agreed to withdraw the rejections and allow the claims if a further search did not yield any other related reference. Interview Summary, p. 2.

Applicant addressed all of the rejections and amended the claims (1, 21, 24, 27, 47 and 50) as requested by the Examiner in Applicant's Amendment and Response to Office Action Dated January 5, 2007, which is attached hereto and incorporated herein by reference. Applicant would not have amended the claims but for the Examiner's agreement that the proposed

amendments would overcome the rejections based on *Holden*. In fact, Applicant would not have requested the interview but for the understanding that the complete *Holden* reference filed with Applicant's Sixth Supplemental Information Disclosure Statement would be considered before reaching any agreement.

Despite the agreement reached with the Examiner during the interview, the Examiner issued a Final Office Action on October 9, 2007, which rejected claims 1-52 under Section 103(a) as being unpatentable over the same reference (*Holden*). With respect to the amendments in claim 1, the Examiner concedes that "*Holden* does not teach 'the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sample probe is moved.'" Final Office Action, pp. 2-3. The Examiner argues, however, "since Applicant's reason of a fast redrawing speed is reduction of processed data (*i.e.*, using sub-volume instead of whole volume), it is just a trade off between the processing speed and the processed data (*Holden* mentions that in p. 6-4)." Final Office Action, p. 3. The Examiner further argues that:

the 'sample probe' is interpreted as a position locator which defines the coordinates of a sample within the volume which is equivalent to *Holden's* GeoSeed (p. 8-16). Applicant's arguments on the slider bar [are] not correct because the slider bars are used to adjust the size of the sub-volume, which is associated with the sample probe, but not the sample probe itself. Since *Holden's* disclosure of movement of GeoSeed (p. 8-16) is always associated with input from a user, drawing is always associated with providing perception to a user, and concurrency is always described as sufficiently fast to be perceived as real-time by the user, the redrawing steps are equivalent. Thus, it would have been obvious to provide the sample probe at substantially the same time as the probe is moved for the purpose of enhancing the interaction of the user to viewing the 3D voxel data.

Id. In response to Applicant's arguments, the Examiner argues that "real-time" speed is obvious due to the reduction of processed data, which the Examiner believes *Holden* emphasizes at p. 6-4. The Examiner's rejection of the remaining independent claims (21, 24, 27, 47 and 50) is based upon the same reasoning. Final Office Action, pp. 8-9.

The Examiner's Final Office Action dated October 9, 2007 contains clear errors, including the omission of one or more elements needed for a *prima facie* rejection of the pending claims under Section 103(a).

The Examiner initially refers to Applicant's use of a sub-volume, instead of the whole volume, to reduce processed data, which the Examiner uses to support his argument that the amendment in claim 1 is obvious. MPEP 2144.06 (citing *In Re Ruff*, 256 F. 2d 590 (CCPA 1958) for the proposition that "equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure.") Realizing that he cannot rely on Applicant's description to support a *prima facie* case of obviousness, the Examiner reverts back to *Holden* to suggest that the amendment in claim 1 is obvious. In particular, the Examiner refers to a statement in *Holden* that "more complex volumes require more time to render" and argues that, therefore, less complex volumes require less time to render – apparently suggesting that "real-time" is obvious in view of what the Examiner implies from *Holden* as "less-time." Final Office Action, p. 3. In support of this argument, the Examiner relies on the *Holden* Tumble-View feature which is described as a volume with a position that is fixed in space. *Holden*, p. 6-1. According to the description of this feature, one advantage is that a user can tumble the volume on any axis. *Holden*, p. 6-4. While the position of the volume remains fixed in space, the user's perspective or viewpoint of that volume is altered. Claim 1, however, requires "repeating the drawing step responsive to movement of the 3D sampling probe(s) ... so that as the 3D sampling probe(s) moves through the 3D volume, the image of the 3D sampling probe(s) is redrawn substantially at the same time as the 3D sampling probe is moved." The Tumble-View feature in *Holden* therefore, does not teach or suggest movement of the volume through a 3D volume wherein the image of the volume is redrawn substantially at the same time as the volume is moved. The

position of the Tumble-View volume is fixed in space. In other words, the Tumble-View volume cannot be both fixed in space and moving through a 3D volume. The fact that more time is required to render more complex volumes in Tumble View does not teach or suggest the limitations of claim 1 – particularly in view of a volume that is fixed in space.

The Examiner also relies on *Holden* to argue that “[s]ince *Holden*’s disclosure of movement of GeoSeed (p. 8-16) is always associated with input from a user, drawing is always associated with providing perception to a user, and concurrency is always described as sufficiently fast to be perceived as real-time by the user, the drawing steps are equivalent.” Final Office Action, p. 3. To the extent Applicant understands this argument, it appears that the Examiner is assuming movement of GeoSeed and taking official notice that “drawing is always associated with providing perception to a user and concurrency is always described as sufficiently fast to be perceived as real-time by the user” to conclude that drawing GeoSeed is equivalent to the drawing steps in claim 1. In short, you cannot get there from the description of GeoSeed. GeoSeed permits the selection (picking) of a seed within a feature of interest and then detects all voxels that 1) are adjacent to the seed or to any other detected voxel, and 2) fall within a user-defined range of voxel values or gradient magnitudes. *Holden*, p. 8-14. Once the detections are completed, the results may be seen in the rendering window as illustrated by *Holden* at page 8-17. The description of the volume illustrated on page 8-17 of *Holden* does not teach or suggest the limitations at issue in claim 1. At most, you can monitor the progress of detection using GeoSeed after the opacity has modulated re-rendering the image at desired intervals as described on pages 8-19 and 8-20 of *Holden*. Re-rendering the image (volume) at desired intervals in GeoSeed simply does teach or suggest repeating the drawing step in claim 1 as amended.

While the Examiner suggests that Applicant's arguments regarding the slider bar are incorrect, the Examiner agreed, during the interview, that the same description previously relied upon by the Examiner did not teach or suggest the amendments discussed during the interview. *Holden* clearly states that the image of the sub-volume does not re-render (redraw) pursuant to movement (editing) along a particular axis until the slider bar is released. In other words, the image of the sub-volume in the rendering window reflects the edits after they are made -- not while they are made. Amendment and Response, pp. 19-20.